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STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER BENGZON, GREG C	
			ART UNIT 2144	PAPER NUMBER
			MAIL DATE 09/28/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/006,705

Applicant(s)

UJYO ET AL.

Examiner

Greg Bengzon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2,3,6-8 and 13-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,3,6-8 and 13-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This application has been examined. Claims 2-3, 6-8, 13-16 are pending.

#### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/09/2007 has been entered.

#### ***Priority***

The effective date of the subject matter claimed in the application is December 18, 2000.

#### ***Information Disclosure Statement***

The Applicant is respectfully reminded that each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in 37 CFR 1.56.

There were no information disclosure statements filed with this application.

***Claim Rejections - 35 USC § 112***

Claims 2-3, 6-8, 13-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 8,13 recite a limitation for '*estimating a processing time required to handle each single response from the delivery destinations before sending the groups of data packets to the delivery destinations*'.

The Examiner has respectfully requested Applicant to provide support in the Specification regarding said limitation but has not received any response. (See Interview Summary)

There are two separate portions of the Applicant Specifications describing 'calculating time'. (Figure 15 Step 43 and Figure 16 Step 61).

The Examiner is interpreting this limitation as the 'control data generating' step as described in Applicant Specifications Figure 15, Page 21, Paragraph [STEP S4].

The Examiner notes that the said portion of the Applicant Specifications describes a '*processing time*' as the time required to write pseudo-data on a database at the delivery source, not the response time from the delivery destination stations.

The Examiner notes that a person of ordinary skill in the art would not be able to determine the response time from the delivery destination stations by writing data into a database at the source station.

Though the statute does not use the term "undue experimentation," it has been interpreted to require that the claimed invention be enabled so that any person skilled in the art can make and use the invention without undue experimentation. The test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation.

The Examiner notes that specification was not enabling with respect to the said claims at issue, noting further that there was no considerable direction and guidance in the specification; that there was no evidence presented by the Applicant of a high level of skill in the art at the time the application was filed; and also no evidence presented that all of the methods needed to practice the invention were well known.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-3, 6-8, 13-15 rejected under 35 U.S.C. 103(a) as being unpatentable over Gemmell (US Patent 6678855) in view of Chiu et al (US Patent 6505253), hereinafter referred to as Chiu, further in view of Lo et al. (US Patent 6122483).

Gemmell disclosed (re. Claims 13 ) generating groups of data, each including at least one data packet from a given set of data packets to be delivered (Gemmell – Figure 15, Column 4 Lines 40-45); (re. Claims 13 ) repeating delivery of each of the groups as many times as specified by said determining (Gemmell – Column 2 Lines 25-35, Column 7 Lines 25-30); (re. Claims 13 ) determining a number of times each of the groups is delivered; (Gemmell – Column 7 Lines 25-30, Column 12 Lines 40-45);

Gemmell disclosed (re. Claim 13 ) specifying a number of delivery destinations to which data is to be delivered (Gemmell – Column 7 Lines 1-5).

However Gemmell (re. Claim 13) did not disclose wherein the delivery destinations respond to the delivery of groups of packets.

Chiu disclosed (re. Claim 13) wherein the delivery destinations respond to the delivery of groups of packets (Chiu- Column 18 Lines 10-15) according to a ACK interval (Chiu- Column 35 Lines 65) and also according to randomly selected timing (Chiu-Column 3 Lines 10-15) to prevent too many ACK messages from reaching the transmitting station at the same time (Column 8 Lines 15-20).

Chiu disclosed a rate control mechanism for multicast transmission. Chiu disclosed (re. Claim 13) , estimating a processing time (Chiu – Column 35 Lines 35-40 ‘TTL scope’, Column 16 Lines 30-35) required to handle each single response from the delivery destinations (Chiu-Column 22 Lines 25-30) ; (re. Claim 13) calculating a total response processing time; (Chiu – Column 35 Lines 35-40, Column 16 Lines 30-35) (re. Claim 13) delivering control information (Chiu- Column 35 Lines 45-60) including the total response processing time, (Chiu – Column 35 Lines 60-65, Column 39 Lines 30-35) to the delivery destinations so that the delivery destinations will respond at a randomly selected timing (Chiu-Column 3 Lines 10-15) within the total response processing time (Chiu – Column 35 Lines 35-40 ‘TTL scope’, Column 16 Lines 30-35) after each group of data packets are received ;

Gemmell and Chiu are analogous art because they present concepts and practices regarding reliable transmission methods for multicasting, while accounting for the congestion rates in the network. (Gemmell – Column 1 Lines 45-50, Column 4 Lines

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15-25; Chiu – Column 11 Lines 60-65) At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the teachings of Chiu into methods and system of Gemmell. The suggested motivation would be, as Chiu suggests (Chiu – Column 9 Lines 35-40), the transmission rate should be high so as to fully use the bandwidth of the network, and should be sufficiently low that packets are not lost due to congestion, or to the inability of a receiver station to keep up with the transmitter.

However, Gemmell-Chiu did not disclose (re. Claim 13) *calculating a total response processing time in proportion to the estimated processing time per response and the number of delivery destinations*. Gemmell-Chiu did not disclose (re. Claim 13) estimating processing time ‘before sending the groups of data packets to the delivery destinations’.

Lo disclosed (re. Claim 13) calculating a total response processing time in proportion to the estimated processing time per response (Lo-Column 9 Lines 35-40, ‘*response time plus propagation delays*’, Column 9 Lines 30-35, ‘*The timer interval is one in which is adequately long for each of the recipient subscriber units receiving a multicast message being transmitted on a previously specified traffic channel to respond*’) and the number of delivery destinations response (Lo-Column 6 Lines 60 thru Column 7 Lines 10)



Lo disclosed (re. Claim 13) estimating processing time 'before sending the groups of data packets to the delivery destinations'. (Lo- Column 9 Lines 30-35,' *The timer interval is one in which is adequately long for each of the recipient subscriber units receiving a multicast message being transmitted on a previously specified traffic channel to respond*')

Gemmell ,Chiu, and Lo are analogous art because they present concepts and practices regarding reliable transmission methods for multicasting, while accounting for the congestion rates in the network. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the teachings of Lo into methods and system of Gemmell-Chiu. The suggested motivation would be, as Lo suggests (Lo-Column 2 Lines 15-20), for multicast acknowledge message to be made while minimizing channel resources.

Gemmell-Chiu-Lo disclosed (re. Claim 2) wherein the group generating determines a number of data packets (Chiu-Column 18 Lines 15-20) included in each group (Gemmell – Column 3 Lines 55-60).

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Gemmell-Chiu-Lo disclosed (re. Claim 3) wherein the group generating unit determines the total amount of data (Chiu-Column 39 30-50) included in each of data packets included in each group (Gemmell – Column 3 Lines 55-60) according to the state of a communication line or delivery destination ( Chiu- Column 39 Lines 40-50).

Gemmell-Chiu-Lo disclosed (re. Claim 6) measuring a congestion state of a system based on time needed for accessing a memory and the state of the load on a processor (Chiu - Figures 5-6, Column 13 Lines 40-50, Column 15 Lines 45-50).

Gemmell-Chiu-Lo disclosed (re. Claim 7) redelivering a previously delivered data packet when one of the delivery destinations has reported that the data packet could not be received. (Chiu – Column 16 Lines 20-25)

Claim 8 is rejected on the same basis as Claim 13.

Gemmell-Chiu-Lo disclosed (re. Claim 14) further comprising repetitively delivering (Gemmell – Column 7 Lines 25-30) the groups before the delivery destinations respond to delivery (Chiu- Column 18 Lines 10-15)

Gemmell-Chiu-Lo disclosed (re. Claim 15) wherein a number of times each of the groups generated by the group generating unit is delivered is greater than one (Gemmell – Column 7 Lines 25-30, Column 12 Lines 40-45);

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Gemmell (US Patent 6678855) in view of Chiu et al (US Patent 6505253), hereinafter referred to as Chiu, further in view of Lo et al. (US Patent 6122483), further in view of Bergsson et al. (US Publication 2002/0071388).

While Gemmell-Chiu-Lo substantially disclosed the invention Gemmell-Chiu-Lo did not disclose (re. Claim 16), wherein the estimating determines the processing time per response, based on measurement of processing load of the computer.

Bergsson disclosed (re. Claim 16), wherein the estimating determines the processing time per response, based on measurement of processing load of the computer. (Bergsson-Paragraph 43, *'sending terminal calculates a throughput rate based upon returned acknowledgement messages'*)

Gemmell, Chiu, Lo and Bergsson are analogous art because they present concepts and practices regarding reliable transmission methods for multicasting, while accounting for the congestion rates in the network. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the teachings of Bergsson into methods and system of Gemmell-Chiu-Lo. The suggested motivation would be, as Bergsson suggests (Bergsson-Paragraph 20), to allow for rapid adjustments in the transmission rates according to the system throughput.

### ***Response to Arguments***

Applicant's arguments filed 07/09/2007 have been considered but are moot in view of the new ground(s) of rejection.

The Applicant presents the following argument(s) *[in italics]*:

*'[In Lo]...the timer interval is determined from how much time each recipient needs to return a response to the sender of the message.*

*By contrast, the claimed processing time is estimated from how much time the sender of packets needs to process each response from recipients, as can be seen from the claim language.'*

The Examiner respectfully disagrees with the Applicant. The Examiner notes USC 112 issues with regards to said claimed processing time as presented above.

Furthermore Lo is setting the timer interval at the source NCC, said timer interval indicating the amount of time for the NCC to wait for the expected response from each of the subscriber units. Lo Column 9 Lines 60-65 disclosed that *if a specified amount of time has elapsed [as indicated by the timer], the NCC then forms a list of subscribers that did not respond*. Thus the timer interval at the NCC is equivalent to the *time the sender of packets needs to process each response from recipients*.

### ***Conclusion***

**Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing

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responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please refer to the enclosed PTO-892 form.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Bengzon whose telephone number is (571) 272-3944. The examiner can normally be reached on Mon. thru Fri. 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on (571)272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Greg Bengzon', is written over a printed name.

Greg Bengzon  
Patent Examiner, AU 2144